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METHOD AND APPARATUS FOR \*CLEANING\* SILICON \*WAFER\* AT LOW TEMPERATURE

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#### ABSTRACT

PURPOSE: To \*freeze\* \*water\* around foreign matter adhering to a wafer as a nucleus and to remove it by \*cleaning\* the \*wafer\*, then mixing low temperature gas with the cleaned \*water\* to set it to two states of liquid before \*freezing\* and solid.

CONSTITUTION: Cleaning \*water\* 3 of pure \*water\* is filled in a cleaning tank 2, maintained at approximately 5 deg.C, and a wafer 1 is cleaned. After the cleaning is finished, low temperature gas, such as liquid nitrogen is mixed with the cleaning \*water\* to reduce the temperature to the vicinity of a \*freezing\* point, it starts \*freezing\* with a foreign matter as a nucleus, thereby becoming two states of \*water\* and ice. The wafer 1 is lifted as designated by an arrow A at a suitable time point of this state. An ice piece 5 in which the matter 4 is as a nucleus is dropped into the \*water\* 3 by means of its own weight as designated by an arrow B. That is, it can prevent the matter 4 from being adhered to the wafer 1, thereby performing the object of cleaning.